SHERRILL ENVIRONMENTAL, INC.
Environmental and Geologic Services

November 8, 2001

Mr. Robert J. Waldrop
ReUse Technology, Inc.
665 Molly Lane, Suite 100
Woodstock, GA 30189

Subject: Groundwater Table Assessment
Swift Creek Extension Project
US Highway 301, Nash County, North Carolina

Dear Mr. Waldrop:

ReUse Technology, Inc. (ReUse) retained Sherrill Environmental, Inc. (Sherrill) to perform a groundwater table assessment at the Swift Creek Project Extension in Nash County, North Carolina. The site is located on the east side of Highway 301 at Swift Creek north of Battleboro, North Carolina. ReUse's Swift Creek Project uses coal combustion by-products as structural fill material in the preparation of a commercial property. The original project will soon be completed. This report addresses ReUse's planned southward extension of the original project.

Sherrill performed a groundwater table assessment at the Swift Creek Project Extension to obtain project information to be used to insure compliance with North Carolina Administrative Code T15A: 13B .1708 regarding beneficial uses for coal combustion by-products. Specifically, Section .1704 (a) "Coal combustion by-products used as structural fill shall not be placed: (3) Within two feet of seasonal high ground-water table."

INVESTIGATION

On October 18, 2001, Sherrill performed three hand auger borings at the Swift Creek Extension site. The locations of the borings are shown on Figure 1. The subject property is located on the Tertiary, Yorktown Formation. The Yorktown Formation consists of fossiliferous clay with varying amounts of fine grained sand, bluish gray, with shell material commonly concentrated in lenses. Materials encountered by the soil borings were consistent with the Yorktown Formation. The predominant materials were sand and sandy clay. A very shelly sandy clay was encountered at the bottom of borings B-1 and B-2. Photographs of the geologic samples representing the borings are presented in Plates 1, 2 and 3. Geologic descriptions of each boring were recorded on Field Borehole Logs and are included in the Appendix.

7309 Still Pond Ct. • Raleigh, NC • 27613
Tel. (919) 420-7822 • Fax (919) 571-0757 • Mobile (919) 418-3894 • E-Mail Roxchem@aol.com

After completion of the soil borings, 2-inch diameter schedule 40 PVC piezometers were constructed in each borehole. The annular space was backfilled with sandy material from the boring. A bentonite seal was placed from a depth of 2 feet to the surface to prevent storm water from entering the piezometer. Prior to constructing the project, the screen and casing will be removed and the boreholes will be filled with bentonite.

Groundwater table measurements were obtained on October 22, 2001, four days after piezometer installation. Elevations of the piezometers were surveyed by ReUse personnel. The groundwater data is presented on Table 1.

INTERPRETATION

A site map for this report was prepared from a portion of "Solid Waste Plan" dated 10/4/01 prepared for ReUse by Appian Consulting Engineers, PA. The Swift Creek Extension and the location of the three piezometers (B-1, B-2 and B-3) are shown on Figure 1. A groundwater table map constructed from the 10/22/01 data is shown in Figure 2. A cross-section of the site is presented in Figure 3.

Sherrill believes that the groundwater measurements obtained on 10/22/01 do not represent the seasonal high groundwater table. Sherrill reviewed six years of annual groundwater table measurements from a facility located near Rocky Mount. The data showed a fluctuation of approximately 2.5 feet in the shallow groundwater table. Adding 2.5 feet to the groundwater table (10/22/01) at the Swift Creek Extension site raises the groundwater table to be approximately equivalent with the boundary of the jurisdictional wetlands at an elevation of 94 feet. Sherrill believes that an elevation of 94 feet is a reasonable estimate for the seasonal high groundwater table.

RECOMMENDATION

The purpose of this report is to provide information that will allow engineers to construct the proposed project to maintain a minimum of 2 feet of vertical separation between the coal combustion by-products and the seasonal high groundwater table. Sherrill recommends that no coal combustion by-product be placed below an elevation of 96 feet. Any project area with an elevation of less than 96 feet should be brought to grade with natural fill. The rule 0.1704 (a) (1) "Coal combustion by-products used as structural fill shall not be placed: (1) Within 50 horizontal feet of a jurisdictional wetland..." appears to eliminate any project area that is of an elevation less than 96 feet.

Prior to construction activities at the site that would require abandonment of the piezometers, additional groundwater table measurements should be obtained. The data will be reviewed and submitted to ReUse as an addendum to this report. We believe that the additional data will support the assumptions made in this report. We anticipate that abandonment of the piezometers will be necessary sometime between January and March 2002.

We appreciate the opportunity to provide you with consultation and environmental services. Thank you for your consideration. If you have any additional questions, or need additional information, please contact us at (919) 420-7822.

Sincerely,

SHERRILL ENVIRONMENTAL, INC.

John Sherrill

John (Jack) F. Sherrill, P.G.

TABLE

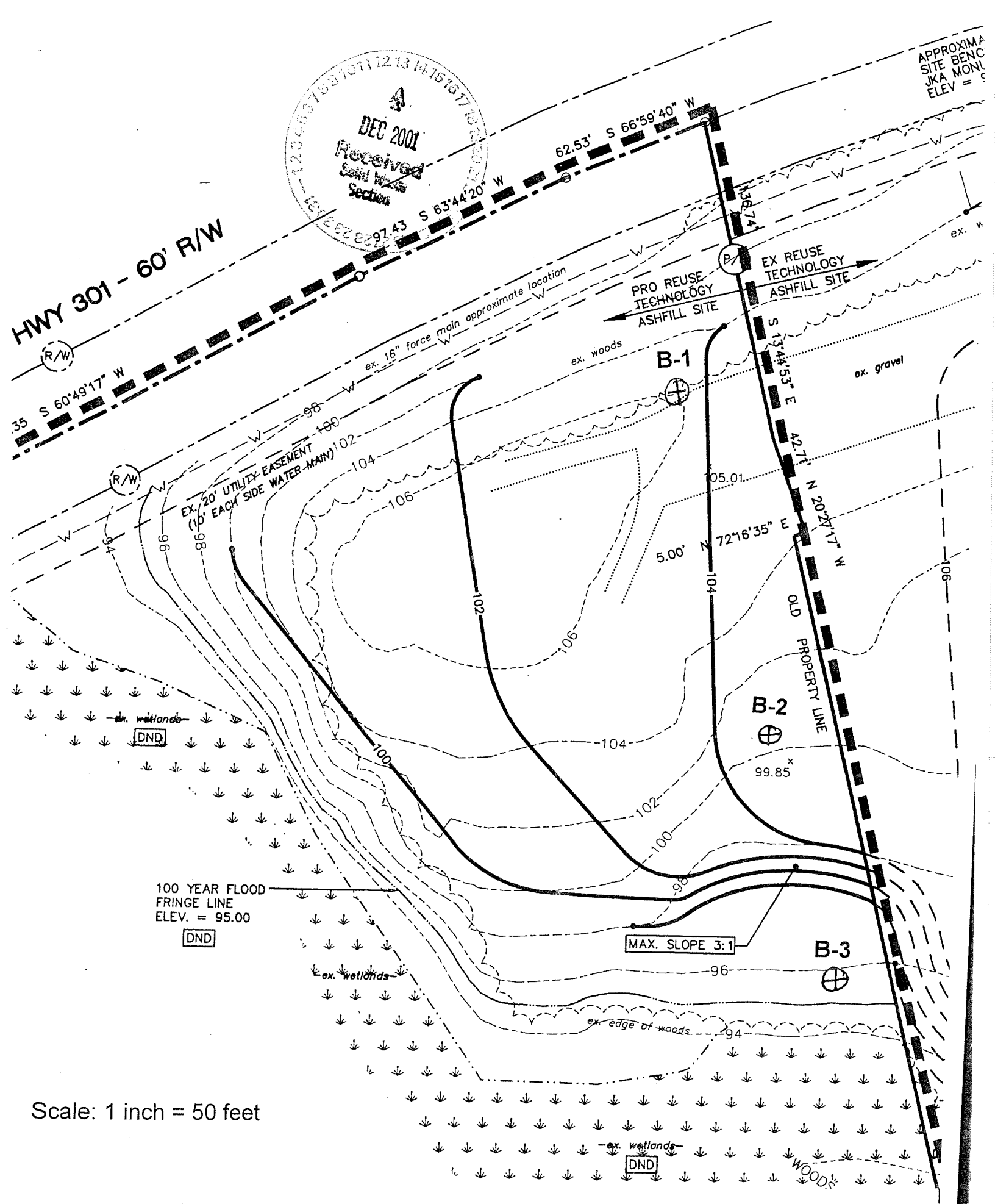
TABLE 1
SWIFT CREEK EXTENTION
GROUNDWATER DATA

Sherrill Environmental, Inc.

Piezometer	Top of Casing Elevation	Ground Surface Elevation	Depth to Groundwater TOC	Depth to Groundwater from Ground Surface	Groundwater Elevation
B-1	108.09	105.94	15.16	13.01	92.93
B-2	103.17	101.09	10.67	8.59	92.50
B-3	99.96	95.89	8.07	4.00	91.89

Piezometers installed on 10/18/01.
Groundwater measurement obtained on 10/22/01.

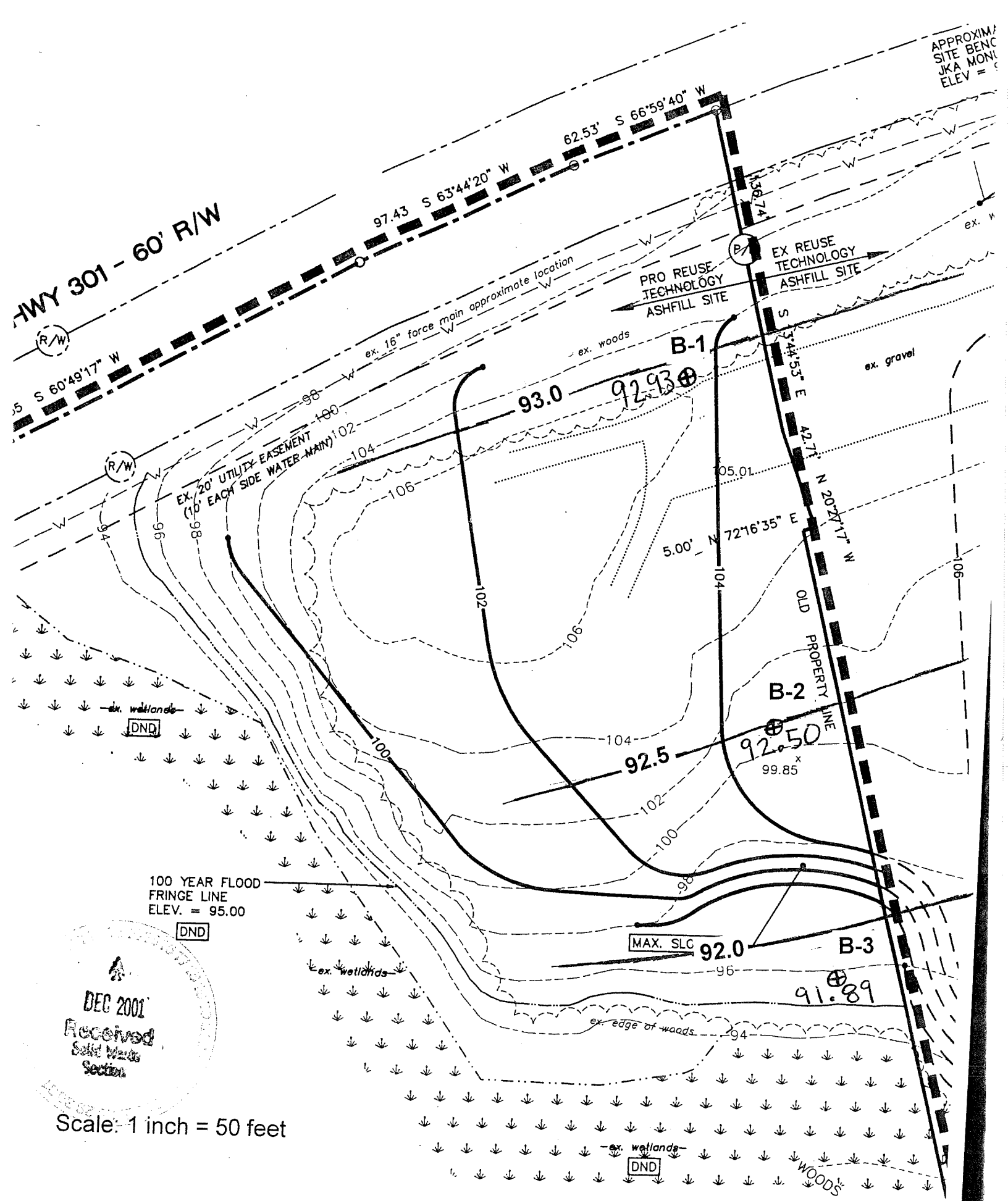
FIGURES



Scale: 1 inch = 50 feet

- 7.88 ACRE TRACT -
DB 1351 PG 522

Figure 1
Site Map



- 7.88 ACRE TRACT -
DB 1351 PG 522

Figure 2
Groundwater Table Map
10/22/01

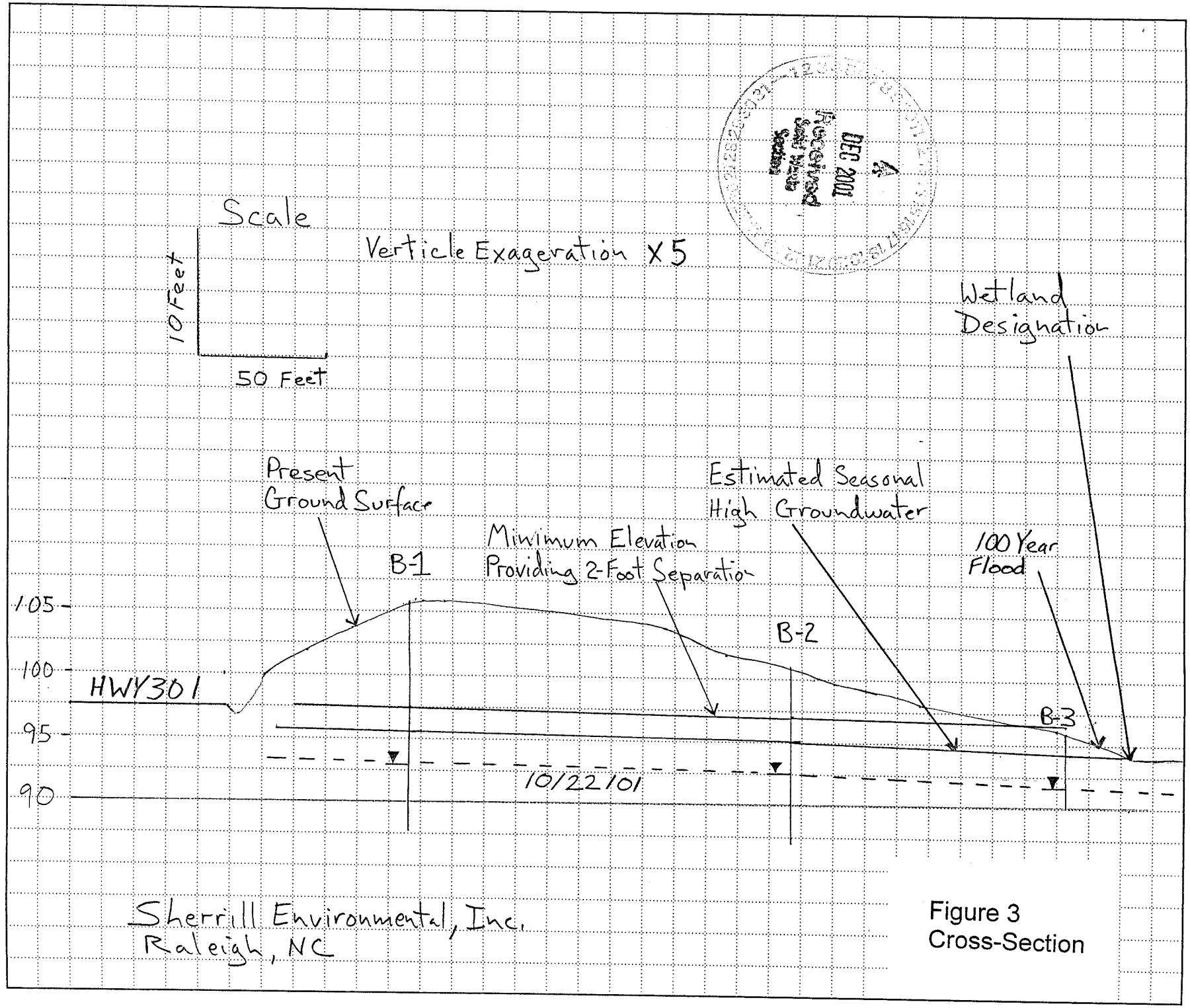
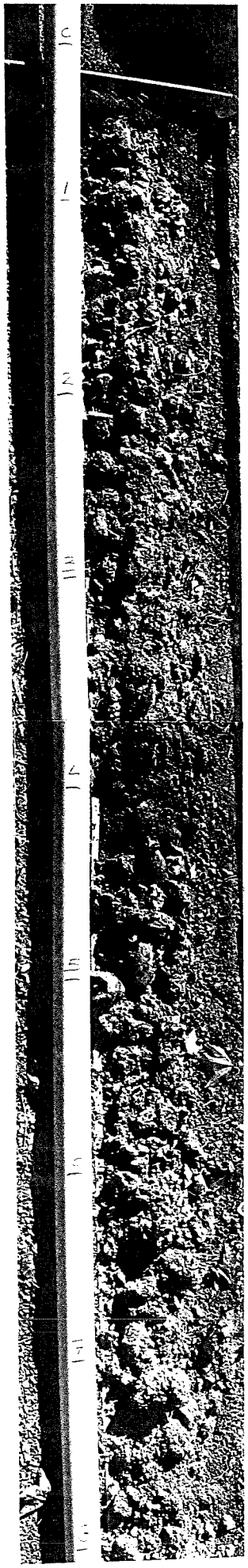
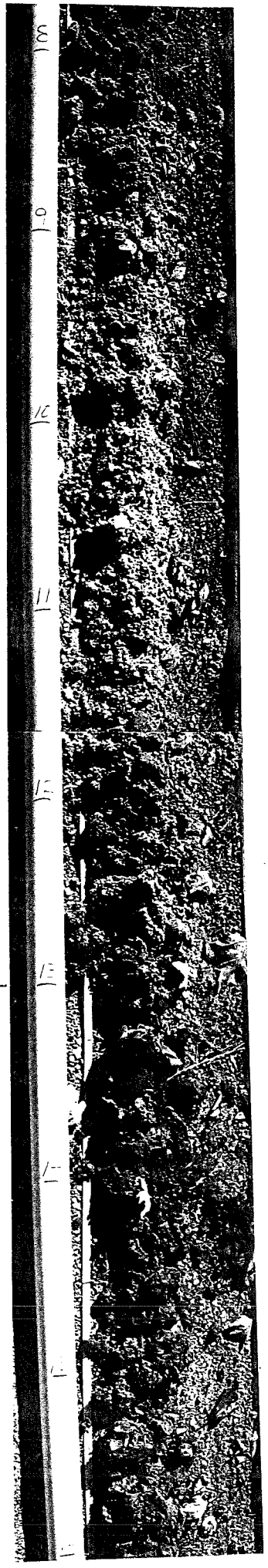


Figure 3
Cross-Section

PLATES





10/22/01

Plate 1
Soil Boring B-1

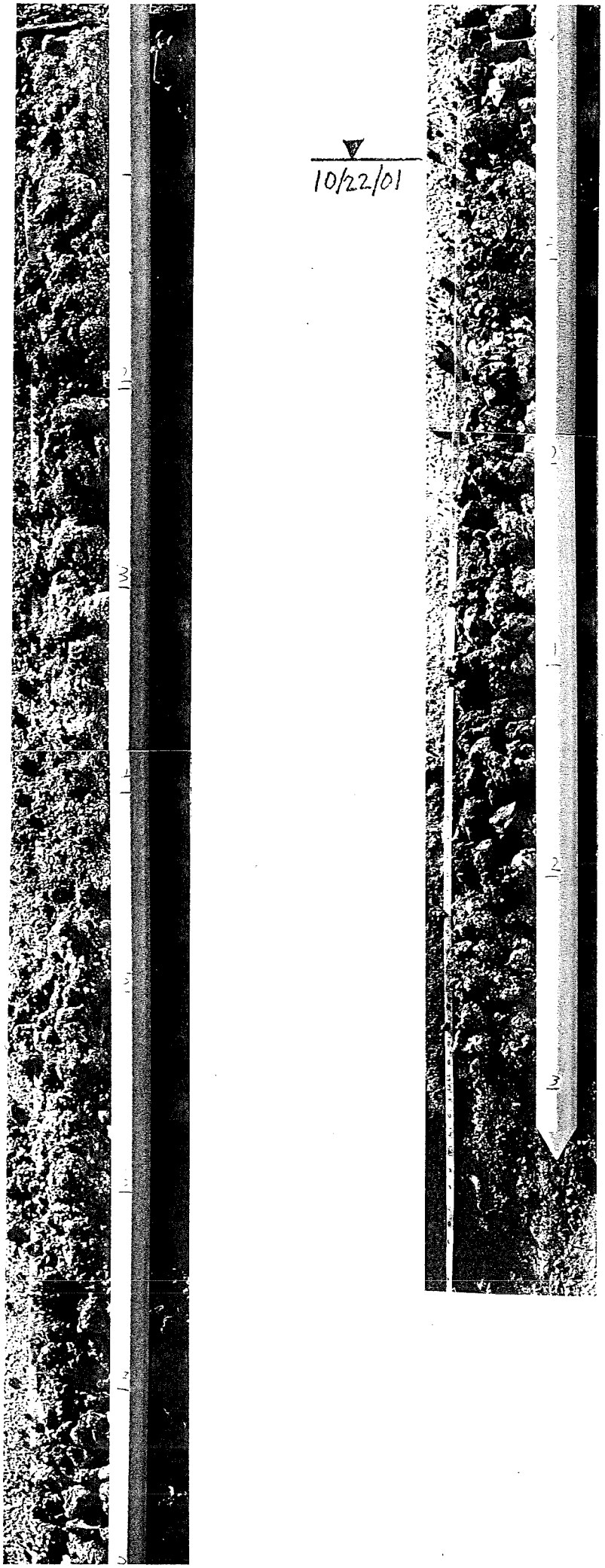
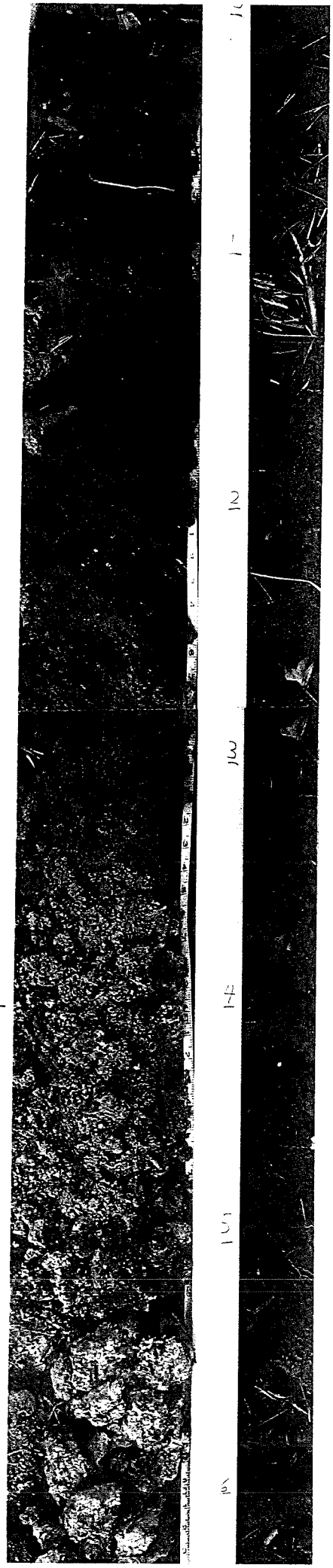


Plate 2
Soil Boring B-2



10/22/01

Plate 3
Soil Boring B-3

APPENDIX

BORING LOGS

FIELD BOREHOLE LOG

PROJECT:	Swift Creek Extension			BORING NO.:	B-1
LOCATION:	US HWY 301, Nash Co. , NC			SHEET:	1 of 1
TYPE OF BORING:	Hand Auger	DATE STARTED:	10/18/01	COORDINATES:	
DRILLING FIRM:	Sherrill Environmental	DATE FINISHED:	10/18/01	NORTHING:	ft
DRILLER:	John Sherrill, P.G.	GROUND ELEV.:	105.9	EASTING:	ft
DRILL RIG:		LOGGED BY: John Sherrill		TOTAL DEPTH:	18.0 ft

DEPTH (ft)	ELEV. (ft)	BLOWS/6"	SAMPLE NO.	RECOVERY	N-VALUE	-	-	CLASSIFI-CATION	FIELD CLASSIFICATION AND PHYSICAL DESCRIPTION	REMARKS
	104.9								0-0.5 Brownish-gray LOAM 0.5-1.5 Yellowish-gray fine SAND	
2	102.9								1.5-4.0 Grayish-yellow fine to medium SAND	
4	100.9								4.0-5.0 Mottled yellowish-gray and reddish-brown sandy CLAY	
6	98.9								5.0-7.0 Mottled grayish-yellow and yellowish-brown clayey SAND	
8	96.9								9.0-9.5 Sandy GRAVEL	
10	94.9								9.5-13.0 Grayish-yellow medium to coarse SAND	
12	92.9									
14	90.9								13.0-16.0 Yellowish-brown clayey SILT and fine sand	13.01 feet Depth to groundwater 10/22/01
16	88.9								16.0-18.0 Blueish-gray clayey SILT, very shelly	
18	86.9									
20	84.9									
22	82.9									
24	80.9									
26	78.9									
28	76.9									
30										

FIELD BOREHOLE LOG

PROJECT:	Swift Creek Extension			BORING NO.:	B-3
LOCATION:	US HWY 301, Nash Co. , NC			SHEET:	1 of 1
TYPE OF BORING:	Hand Auger	DATE STARTED:	10/18/01	COORDINATES:	
DRILLING FIRM:	Sherrill Environmental, Ir	DATE FINISHED:	10/18/01	NORTHING:	ft
DRILLER:	John Sherrill, P.G.	GROUND ELEV.:	95.9	EASTING:	ft
DRILL RIG:		LOGGED BY: John Sherrill		TOTAL DEPTH:	6.3 ft

DEPTH (ft)	ELEV. (ft)	BLOWS/6"	SAMPLE NO.	RECOVERY	N-VALUE	-	-	CLASSIFI-CATION	FIELD CLASSIFICATION AND PHYSICAL DESCRIPTION	REMARKS
	95.4								0-3.0 Brownish-gray sandy LOAM	
1	94.4									
2	93.4									
3	92.4								3.0-5.0 Yellowish-gray medium SAND	
4	91.4									4.0 feet Depth to groundwater 10/22/01
5	90.4								5.0-5.3 Mottled gray and reddish-brown clayey SAND	
6	89.4								5.3-6.3 Gray fine sandy CLAY	
7	88.4									
8	87.4									
9	86.4									
10	85.4									
11	84.4									
12	83.4									
13	82.4									
14	81.4									
15										